

Permit #: #28.0102-27-01C

Effective Date: Draft

The seal of the State of South Dakota is a circular emblem. The outer ring contains the text "STATE OF SOUTH DAKOTA" at the top and "GREAT SEAL" at the bottom, separated by two stars. The year "1889" is inscribed at the bottom center of the seal. Inside the ring, a banner reads "UNDER GOD THE PEOPLE RULE". The central image of the seal depicts a landscape with a river, a windmill, and a plow, symbolizing the state's agricultural heritage.

**SOUTH DAKOTA DEPARTMENT OF
ENVIRONMENT AND NATURAL RESOURCES
AIR QUALITY
CONSTRUCTION PERMIT**

**Steven M Pirner, Secretary
Department of Environment and Natural Resources**

Under the South Dakota Air Pollution Control Regulations

Pursuant to Chapter 34A-1-21 of the South Dakota Codified Laws and the Air Pollution Control Regulations of the State of South Dakota and in reliance on statements made by the owner designated below, a permit to construct and operate is hereby issued by the Secretary of the Department of Environment and Natural Resources. This permit authorizes such owner to construct and operate the permitted unit(s) at the location designated below and under the listed conditions.

A. Owner

1. Company Name and Mailing Address

Black Hills Health Care System
Hot Springs Medical Center
500 North 5th Street
Hot Springs, SD 57747-1497

2. Actual Source Location if Different from Above

Same as above

3. Permit Contact

John Henderson, Engineering Program Manager
(605) 745-7257

4. Facility Contact

William Baker, Chief Facilities Management
(605) 745-2054

5. Responsible Official

William Baker, Chief Facilities Management
(605) 745-2054

B. Permit Revisions or Modifications

Not applicable

C. Type of Operation

Steam generation for Veterans Administration hospital.

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1.0 STANDARD CONDITIONS

1.1 Construction and operation of source.

In accordance with Administrative Rules of South Dakota (ARSD) 74:36:20:15(9), the owner or operator shall construct and operate the units, controls, and processes as described in Table 1-1 in accordance with the statements, representations, and supporting data contained in the complete permit application submitted and dated August 30, 2011 and September 7, 2011, unless modified by the conditions of this permit. Except as otherwise provided herein, the control device in Table 1-1 shall be operated in manner that achieves compliance with the conditions of this permit at all times. The application consists of the application forms, supporting data, and supplementary correspondence. If the owner or operator becomes aware that it failed to submit any relevant facts in a permit application or submitted incorrect information in an application, such information shall be promptly submitted.

Table 1-1 – Description of Permitted Units, Operations, and Processes

Unit ID	Unit Description	Designed Maximum Operating Rate	Control Device
Unit #6	2011 Cleaver Brooks boiler, model CEW-101-500-200ST fired on distillate oil	20.4 million Btus per hour heat input	Not Applicable

1.2 Duty to comply.

In accordance with ARSD 74:36:20:15(12)(a) and (c), the owner or operator shall construct and operate in compliance with the conditions of this permit. An owner or operator who knowingly makes a false statement in any record or report or who falsifies, tampers with, or renders inaccurate, any monitoring device or method is in violation of this permit. A violation of any condition in this permit is grounds for enforcement, reopening this permit, permit termination, or denial of an application to operate. The owner or operator, in an enforcement action, cannot use the defense that it would have been necessary to cease or reduce the permitted activity to maintain compliance. The owner or operator shall provide any information requested by the Secretary to determine compliance or whether cause exists for reopening or terminating this permit.

1.3 Property rights or exclusive privileges.

In accordance with ARSD 74:36:20:15(12)(b), the issuance of this permit, adoption of design criteria, and approval of plans and specifications does not convey any property rights of any sort, any exclusive privileges, any authorization to damage, injure or use any private property, any authority to invade personal rights, any authority to violate federal, state or local laws or regulations, or any taking, condemnation or use of eminent domain against any property owned by third parties. The State does not warrant the owner's or operator's compliance with this permit, design criteria, approved plans and specifications, and operation under this permit, will not cause damage, injury or use of private property, an invasion of personal rights, or violation of federal, state or local laws or regulations. The owner or operator is solely and severally liable for all damage, injury or use of private property, invasion of personal rights, infringement of federal,

state or local laws and regulations, or taking or condemnation of property owned by third parties, which may result from actions taken under the permit.

1.4 Penalty for violating a permit condition.

In accordance with South Dakota Codified Laws (SDCL) 34A-1-39 and 34A-1-47, a violation of a permit condition may subject the owner or operator to civil or criminal prosecution, a state penalty of not more than \$10,000 per day per violation, injunctive action, administrative permit action, and other remedies as provided by law.

1.5 Inspection and entry.

In accordance with SDCL 34A-1-41, the owner or operator shall allow the Secretary to:

1. Enter the premises where a regulated activity is located or where pertinent records are stored;
2. Have access to and copy any records that are required under this permit;
3. Inspect the construction and operations regulated under this permit; and/or
4. Sample or monitor any substances or parameters for the purpose of assuring compliance.

1.6 Severability.

In accordance with ARSD 74:36:20:15(11), any portion of this permit that is void or challenged shall not affect the validity of the remaining permit requirements.

1.7 Credible evidence.

In accordance with ARSD 74:36:13:07, credible evidence may be used for the purpose of establishing whether the owner or operator has violated or is on violation of this permit. Credible evidence is as follows:

1. Information from the use of the following methods is presumptively credible evidence of whether a violation has occurred at the source:
 - a. A monitoring method approved for the source pursuant to 40 CFR § 70.6(a)(3) and incorporated in this permit; or
 - b. Compliance methods specified in an applicable plan;
2. The following testing, monitoring, or information gathering methods are presumptively credible testing, monitoring, or information-gathering methods:
 - a. Any monitoring or testing methods approved in this permit, including those in 40 CFR Parts 51, 60, 61, and 75; or
 - b. Other testing, monitoring, or information-gathering methods that produce information comparable to that produced by any method in section (1) or (2)(a).

2.0 CONSTRUCTION AND OPERATING PERMIT DEADLINES

2.1 Commence construction.

In accordance with ARSD 74:36:20:21, this permit becomes invalid if the owner or operator has not commenced construction within 18 months of the effective date of this permit; discontinued construction for a period of 18 months or more; or construction is not completed within 10 years of the effective date of this permit.

2.2 Submit operating permit application.

In accordance with ARSD 74:36:20:20, the owner or operator shall submit a complete permit application for an operating permit pursuant to ARSD 74:36:05. A complete permit application for a Title V air quality operating permit shall be submitted within 12 months after the initial startup of Unit #6. For the purpose of this permit condition, initial startup means the first time fuel is fired in Unit #6.

3.0 PERMIT REVISIONS

3.1 Administrative permit amendment.

In accordance with ARSD 74:36:20:16 and 74:36:20:17, the Secretary shall determine whether an administrative permit amendment is applicable to a proposed revision within 15 days from receiving a request for a permit revision. The Secretary shall issue an administrative permit amendment without the procedural requirements applicable to obtaining this construction permit. As provided in ARSD 74:36:01:03, the Secretary considers a proposed revision an administrative permit amendment if the proposed revision accomplishes one of the following:

1. Corrects typographical errors;
2. Changes the name, address, or phone number of any person identified in this permit or provides a similar minor administrative change at the source;
3. Requires more frequent monitoring or reporting by the source;
4. The ownership or operational control of a source changes and the Secretary determines that no other change in this permit is necessary. However, the new owner must submit a certification of applicant form and a written statement specifying the date for transfer of operating permit responsibility, coverage, and liability; or
5. Any other change that the Secretary determines to be similar to those requirements in this condition.

3.2 Reopening permit.

In accordance with ARSD 74:36:20:18 and 74:36:20:19, the Secretary may reopen this permit for further review if the Secretary determines the permit contains a material mistake in establishing the emissions standard or limits or other requirements of the construction permit or the Secretary determines the construction permit must be revised to ensure compliance with the applicable requirements of ARSD 74:36 and the federal Clean Air Act. The Secretary shall notify the owner or operator 30 days prior to reopening a construction permit or in a shorter time period in an emergency. The reopening of this construction permit shall follow the same procedural requirements to issue a construction permit and shall affect only those parts of the permit for which cause to reopen exist.

4.0 RECORDKEEPING AND REPORTING

4.1 Recordkeeping and reporting.

In accordance with ARSD 74:36:20:15(10), the owner or operator shall maintain all monitoring data, records, reports, and pertinent information specified by this permit for five years from the date of sample, measurement, report, or application. The records shall be maintained on site for the first two years and may be maintained off site for the last three years. All records must be made available to the Secretary for inspection. All notifications and reports shall be submitted to the following address:

South Dakota Department of Environment and Natural Resources
PMB 2020, Air Quality Program
523 E. Capitol, Joe Foss Building
Pierre, SD 57501-3181

4.2 Construction date notification.

In accordance with ARSD 74:36:20:15(10), the owner or operator shall notify the Secretary of the date construction commences on the Unit #6. The notification shall be postmarked within 15 days after the date construction commenced.

4.3 Initial startup notification.

In accordance with ARSD 74:36:20:15(10), the owner or operator shall notify the Secretary of the actual date of the initial startup of the Unit #6. The notification shall be postmarked within 15 days after the date of initial startup. For the purpose of this permit condition, initial startup means the first time fuel is fired in Unit #6.

4.4 Certification statement.

In accordance with ARSD 74:36:20:15(10), all documents required by this permit, including application forms, reports, and compliance certification, must be certified by a responsible official or a duly authorized representative. The certification shall include the following statement:

“I certify that, based on information and belief formed after reasonable inquiry, the statements and information in this document and all attachments are true, accurate, and complete.”

4.5 Reporting permit violations.

In accordance with ARSD 74:36:20:15(10), the owner or operator shall report all permit violations. A permit violation should be reported as soon as possible, but no later than the first business day following the day the violation was discovered. The permit violation may be reported by telephone to the South Dakota Department of Environment and Natural Resources at (605) 773-3151 or by FAX at (605) 773-5286.

A written report shall be submitted within five days of discovering the permit violation. Upon prior approval from the Secretary, the submittal deadline for the written report may be extended up to 30 days. The written report shall contain:

1. A description of the permit violation and its cause(s);
2. The duration of the permit violation, including exact dates and times; and
3. The steps taken or planned to reduce, eliminate, and prevent reoccurrence of the permit violation.

5.0 CONTROL OF REGULATED AIR POLLUTANTS

5.1 Visibility limit.

In accordance with ARSD 74:36:12:01, the owner or operator may not discharge into the ambient air an air contaminant of a density equal to or greater than that designated as 20 percent opacity from any permitted unit, operation, or process listed in Table 1-1, unless otherwise specified in this permit. This provision does not apply when the presence of uncombined water is the only reason for failure to meet the requirement.

5.2 Visibility exceedances.

In accordance with ARSD 74:36:12:02, an exceedance of the operating limit in permit condition 5.1 is not considered a violation during brief periods of soot blowing, start-up, shutdown, or malfunctions. A malfunction is described as any sudden and unavoidable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. A failure caused entirely or in part by poor maintenance, careless operation, preventable equipment breakdown, or any other cause within the control of the owner or operator of the source is not a malfunction and is considered a violation.

5.3 Circumvention not allowed. In accordance with ARSD 74:36:20:24, the owner or operator may not install, use a device, or use a means that conceals or dilutes an air emission that would otherwise violate this permit. This includes operating a unit or control device that emits air pollutants from an opening other than the designed stack, vent, or equivalent opening.

5.4 Minimizing emissions. In accordance with ARSD 74:36:20:15(9), the owner or operator shall at all time, when practicable, maintain and operate all permitted units in a manner that minimizes air pollution emissions.

6.0 PERFORMANCE TESTS

6.1 Performance test may be required.

In accordance with ARSD 74:36:11:02, the Secretary may request a performance test. A performance test shall be conducted while operating the unit at or greater than 90 percent of its maximum design capacity, unless otherwise specified by the Secretary. A performance test that

is conducted while operating at less than 90 percent of its maximum design capacity will result in the operation being limited to the percent achieved during the performance test. The Secretary has the discretion to extend the deadline for completion of the performance test required by the Secretary if circumstances reasonably warrant but will not extend the deadline past a federally required performance test deadline.

6.2 Test methods and procedures.

In accordance with ARSD 74:36:11:01, the owner or operator shall conduct the performance test in accordance with 40 CFR Part 60, Appendix A, 40 CFR Part 63, Appendix A, and 40 CFR Part 51, Appendix M. The Secretary may approve an alternative method if a performance test specified in 40 CFR Part 60, Appendix A, 40 CFR Part 63, Appendix A, and 40 CFR Part 51, Appendix M is not applicable or required.

6.3 Representative performance test.

In accordance with ARSD 74:36:07:01, as referenced to 40 CFR § 60.8(c), performance tests shall be conducted under such conditions as the Secretary shall specify to the owner or operator based on the representative performance of the unit being tested. The owner or operator shall make available to the Secretary such records as may be necessary to determine the conditions of the performance tests. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test nor shall emissions in excess of the level of the applicable emission limit during periods of startup, shutdown, and malfunction be considered a violation of the applicable emission limit unless otherwise specified in this permit.

6.4 Submittal of test plan.

In accordance with ARSD 74:36:11:01, the owner or operator shall submit the proposed testing procedures to the Secretary at least 30 days prior to any performance test. The Secretary will notify the owner or operator if the proposed test procedures are approved or denied. If the proposed test procedures are denied, the Secretary will provide written notification that outlines what needs to be completed for approval.

6.5 Notification of test.

In accordance with ARSD 74:36:11:03, the owner or operator shall notify the Secretary at least 10 days prior to the start of a performance test to arrange for an agreeable test date when the Secretary may observe the test. The Secretary may extend the deadline for the performance test in order to accommodate schedules in arranging an agreeable test date.

6.6 Performance test report.

In accordance with ARSD 74:36:20:15(10), the owner or operator shall submit a performance test report to the Secretary within 60 days after completing the performance test or by a date designated by the Secretary. The performance test report shall contain the following information:

1. Description of the process and the air pollution control system being tested;
2. Sampling location description(s);
3. A description of sampling and analytical procedures and any modifications to standard procedures;
4. Test results expressed in units consistent with the applicable emission limit;
5. Quality assurance procedures and results;
6. Records of unit's operating conditions during the test (e.g., operating rate, fuel type);
7. Raw data sheets for field sampling and field and laboratory analyses;
8. Documentation of calculations;
9. All data recorded and used to establish parameters for compliance monitoring; and
10. Any other information required by the test method.

7.0 NSPS SUBPART DC FOR BOILERS

7.1 Standard for sulfur dioxide.

In accordance with ARSD 74:36:07:05, as referenced to 40 CFR, § 60.42c(d), (h)(1), and (i) the owner or operator shall not combust oil that contains greater than 0.5 weight percent sulfur in the boiler. Compliance with the sulfur limit shall be determined based on a certification from the fuel supplier. The fuel certification must include the information in permit condition 7.5. The fuel oil sulfur limit shall apply at all times, including periods of start-up, shutdown, and malfunctions.

7.2 Initial performance test.

In accordance with ARSD 74:36:07:05, as referenced to 40 CFR § 60.44c(h), the initial performance test shall consist of the certification from the fuel supplier, as described in permit condition 7.5.

7.3 Date of construction and startup notification.

In accordance with ARSD 74:36:07:01 and ARSD 74:36:07:05, as referenced to 40 CFR § 60.7(a) and § 60.48c(a), the owner or operator shall submit notification of the date of construction and initial startup of the boiler. The notification shall include:

1. Name of facility, permit number, and reference to this permit condition;
2. Identify the submittal as a construction or initial startup notification;
3. Identify the date of construction and/or date of initial startup, whichever notification is applicable; and
4. The design heat input capacity of the boiler and identification of fuels to be combusted in the unit.

The notification of the date of construction or reconstruction must be postmarked no later than 30 days after construction or reconstruction commences. The initial startup notification must be postmarked within 15 days after the date of actual startup.

7.4 Semi-annual report.

In accordance with ARSD 74:36:07:05, as referenced to 40 CFR § 60.48c(e), and (j), the owner or operator shall submit a semi-annual report to the Secretary. The semi-annual reports shall contain the following information:

1. Name of facility, permit number, reference to this permit condition, identifying the submittal as a semi-annual report, and the calendar dates covered in the reporting period;
2. Copies of the fuel supplier certification, as required in permit condition 7.5, for each load of distillate oil purchased or received during the reporting period. If no distillate oil is purchased or received during the reporting period, a statement that no distillate oil was purchased or received shall be included; and
3. A certified statement signed by the owner or operator of the affected facility that the records of fuel supplier certifications submitted represent all of the fuel combusted during the reporting period.

The semiannual reports must be postmarked no later than 30 days after the end of the reporting period (i.e., July 30th and January 30th).

7.5 Monitoring sulfur content.

In accordance with ARSD 74:36:07:05, as referenced to 40 CFR § 60.48c(f) the owner or operator shall obtain a fuel supplier certification for each load of distillate oil purchased or received. The fuel supplier certification shall include the following information:

1. The name of the oil supplier;
2. A statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil given in permit condition 7.7; and
3. A statement that the sulfur content of the oil does not exceed 0.5 weight percent sulfur.

7.6 Records of fuel used.

In accordance with ARSD 74:36:07:05, as referenced to 40 CFR, § 60.48c(g)(2), the owner or operator shall record and maintain records of the amount of distillate oil combusted in the boiler during each calendar month.

7.7 Changing boiler fuels.

In accordance with ARSD 74:36:07:05, as referenced to 40 CFR § 60.40c, the boiler shall be fired on distillate oil. If the boilers are fueled with other fuels such as propane, coal, other oil, or wood, additional standards and requirements in 40 CFR Part 60, Subpart Dc may apply. The owner or operator shall apply for and obtain approval from the Secretary before other fuels can be used as a fuel in the boiler.

Distillate oil means fuel oil that complies with the specifications for fuel oil numbers 1 or 2. Residual oil means crude oil, fuel oil that does not comply with the specifications under the definition of

distillate oil, and all fuel oil numbers 4, 5, and 6. Specifications for fuel oils are defined in the American Society for Testing and Materials in ASTM D396-78, "Standards Specifications for Fuel Oils".

8.0 MACT SUBPART JJJJJJ FOR BOILERS

8.1 Particulate matter emissions limit.

In accordance with 40 CFR § 63.11201(a) and (d), the owner or operator shall not allow emissions of particulate matter in excess of the emission limit specified in Table J-1 for the identified boiler. The emission limit applies at all times except during periods of startup and shutdown.

Table J-1 –Particulate Matter Emission Limit

Unit	Description	Emission Limit
#6	Boiler	0.03 pounds per million Btu heat input

8.2 Work practice standard

In accordance with 40 CFR § 63.11201(b), the owner or operator shall conduct the following work practice standards:

1. The owner or operator shall minimize startup and shutdown periods following the manufacturer's recommended procedures for startup and shutdown of the boiler. If the manufacturer recommended procedures are not available, the owner or operator shall follow the recommend procedures of a similar designed boiler for which manufacturer's recommended procedures are available; and
2. The owner or operator shall conduct a biennial tune-up of the boiler as specified in permit condition 8.11.

8.3 Operational limit

In accordance with 40 CFR §§ 63.11201(c) and (d) and 63.11212(c), the owner or operator shall at all times maintain the operating load of the boiler to less than or equal to 110 percent of the operating load recorded during the most recent performance test.

8.4 Site-Specific Monitoring plan

In accordance with 40 CFR §§ 63.11205(c) and 63.11224(c), the owner or operator shall develop and maintain a site-specific monitoring plan to demonstrate the boiler will not exceed 110 percent of the operating load recorded during the most recent performance test. The site-specific monitoring plan shall include the following requirements:

1. Performance and equipment specifications for the device measuring the operating load and the data collection system;

2. Performance evaluation procedures and acceptance criteria (e.g. calibrations) for the device measuring the operating load;
3. Ongoing operation and maintenance procedures in accordance with the following requirements:
 - a. Maintain the necessary parts for routine repairs of the device measuring the operating load and data collection system; and
 - b. Install, operate, and verify data as specified by the manufacturer either prior to or in conjunction with the initial performance test required in permit condition 8.5. Verification of operational status shall, at a minimum, include completion of the manufacturer's written specifications or recommendation for installation, operation, and calibration of the system;
4. Ongoing data quality assurance procedures in accordance with the following:
 - a. Initial and any subsequent calibration of the device measuring the operating load;
 - b. Preventative maintenance of the device measuring the operating load, include spare parts inventory;
 - c. Data recording and reporting;
 - d. Accuracy audit procedures, including analysis methods; and
 - e. Program of corrective action if the device measuring the operating load or data collection system malfunctions;
5. Ongoing recordkeeping and reporting procedures in accordance with the following:
 - a. All measurements from the device measuring the operating load;
 - b. Date and time identifying each period during which the device measuring the operating load was inoperative;
 - c. The specific identification (e.g., the date and time of commencement and completion) of each time period where the operating load exceeds 110 percent of the operating load recorded during the most recent performance test that occurs during startups, shutdowns, and malfunctions of the boiler;
 - d. The specific identification (e.g., the date and time of commencement and completion) of each time period where the operating load exceeds 110 percent of the operating load recorded during the most recent performance test that occurs during periods other than startups, shutdowns, and malfunctions;
 - e. The nature of the repairs or adjustment of the device measuring the operating load or data collection system; and
 - f. The total operating time of the boiler during the reporting period.
6. The owner or operator shall conduct a performance evaluation of the device measuring the operating load in accordance with the site-specific monitoring plan; and
7. The owner or operator shall operate and maintain the device measuring the operating load in continuous operation in accordance with the site-specific monitoring plan.

The owner or operator shall submit a copy of the site-specific monitoring plan to the Secretary, upon request, for approval. The site-specific monitoring plan, if requested, shall be submitted at least 60 days prior to the initial performance evaluation of the device measuring the operating load.

8.5 Initial compliance demonstration for emission and operational limit

In accordance with 40 CFR §§ 63.11210(a) and (d), 63.11211(a), and 63.11212(c), the owner or operator shall demonstrate initial compliance with permit condition 8.1 by conducting an initial particulate matter performance test in accordance with permit condition 8.6 within 180 days after the initial startup of the boiler, establish the operational limit in permit condition 8.2 according to permit condition 8.10, and conduct a performance evaluation of the device measuring the operating load according to permit condition 8.4.

8.6 Performance test procedures

In accordance with 40 CFR § 63.11212, the owner or operator shall conduct particulate matter performance tests in accordance with the following procedures:

1. Select a sampling port location and the number of traverse points according to 40 CFR Part 60, Appendix A, Method 1;
2. Determine velocity and volumetric flow rate of the stack gas according to 40 CFR Part 60, Appendix A, Methods 2, 2F, or 2G
3. Determine oxygen and carbon dioxide concentrations of the stack gas according to 40 CFR Part 60, Appendix A, Methods 3A or 3B or ASTM D6522-00 (reapproved 2005) or ANSI/ASME PTC 19.10-1981;
4. Measure the moisture content of the stack gas according to 40 CFR Part 60, Appendix A, Method 4;
5. Measure the particulate matter emission concentrations according to 40 CFR Part 60, Appendix A, Methods 5 or 17 with a minimum of 1 dry standard cubic meters of sample volume per run; and
6. Convert the particulate matter emissions concentration to a pounds per million Btus emission rate using the F-Factor methodology and equations in section 12.2 and 12.3 of 40 CFR Part 60, Appendix A, Method 19.

8.7 Initial compliance with work practice standard

In accordance with 40 CFR § 63.11214(b) and (d), the owner or operator shall demonstrate initial compliance with permit condition 8.2 by the following:

1. Conduct a performance tune-up within 180 days after the initial startup of the boiler according to permit condition 8.11 and submit a signed statement in the Notification of Compliance Status report required in permit condition 8.13 that indicates the owner or operator conducted a tune-up of the boiler; and
2. Submit a signed statement in the Notification of Compliance Status report required in permit condition 8.13 that indicates the owner or operator minimized the boiler's startup and shutdown periods by conducting startups and shutdowns according to the manufacturer's recommended procedures or procedures specified for a boiler of similar design if the manufacturer's recommended procedures are not available.

8.8 Periodic performance tests

In accordance with 40 CFR § 63.11220(a), the owner or operator shall conduct a subsequent particulate matter performance test on a triennial basis. The performance test shall be conducted within 37 months from the date the initial or periodic performance was previously completed to determine compliance with the particulate matter emission limit in permit condition 8.1 and re-establish the operational limit in permit condition 8.3. The particulate matter test shall be conducted in accordance with permit condition 8.6.

8.9 Demonstration of continuous compliance with monitoring data

In accordance with 40 CFR §§ 63.11221 and 63.11224(d), the owner or operator shall monitor and collect data according to the following:

1. The owner or operator shall operate the device measuring the operating load and the data collection system at all times the boiler is operating except for periods of monitoring system malfunctions, repairs associated with a monitoring system malfunction, and required monitoring system quality assurance or quality control activities. A monitoring system malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring system failures caused in part by poor maintenance or careless operation are not malfunctions. The owner or operator is required to return the monitoring system to operation as expeditiously as practicable;
2. The owner or operator may not use data recorded during monitoring system malfunctions, repairs associated with monitoring system malfunctions, or required monitoring system quality assurance or control activities; and
3. Except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions and required monitoring system quality assurance or quality control activities, failure to collect required data is a deviation of the monitoring requirements.

8.10 Demonstration of continuous compliance with emission limit

In accordance with 40 CFR § 63.11222(a)(1) and (b), following the date on which the initial compliance demonstration is completed or is required to be completed in accordance with permit condition 8.5, whichever date comes first, the owner or operator shall continuously monitor the operating parameters in permit condition 8.3. Operation above the established maximum operating limit constitutes a deviation from the operating limit in permit condition 8.3, except during performance tests conducted to determine compliance with the emission and operating limits or to establish new operating limits. Operating limits are confirmed or reestablished during performance tests. The owner or operator must report each instance in which the owner or operator did not meet the emission limit in permit condition 8.1 or the operating limit in permit condition 8.3. These instances are deviations from the emission limit in permit condition 8.1 and must be reported in accordance with permit condition 8.14.

8.11 Boiler tune-up

In accordance with 40 CFR § 63.11223(a) and (b), the owner or operator shall conduct a tune-up of the boiler on a biennial basis. The biennial tune-up shall be conducted within 25 months from

the date the previously conducted tune-up was completed. The tune-up shall meet the following requirements:

1. As applicable, inspect the burner, and clean or replace any components of the burner as necessary. The owner or operator may delay the burner inspection until the next scheduled shutdown, however, the burner must be inspected at least once every 36 months;
2. Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available;
3. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly;
4. Optimize total emissions of carbon monoxide. This optimization should be consistent with the manufacturer's specifications, if available;
5. Measure the concentrations in the effluent stream of carbon monoxide in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made);
6. Maintain onsite and submit, if requested by the Secretary, a report containing the following information:
 - a. The concentrations of carbon monoxide in parts per million, by volume, and oxygen in volume percent, measured before and after the tune-up of the boiler;
 - b. A description of any corrective actions taken as a part of the tune-up of the boiler; and
 - c. The type and amount of fuel used over the 12 months prior to the biennial tune-up of the boiler; and
7. If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within one week of startup.

8.12 Initial startup of boiler

In accordance with 40 CFR §§ 63.11225(a)(1), the owner or operator shall submit a notification to the Secretary within 15 days after the initial startup of the boiler. The initial startup of the boiler is the date fuel is first fired in the boiler.

8.13 Notice of Compliance Status

In accordance with 40 CFR §§ 63.11225(a)(4), the owner or operator shall submit a Notification of Compliance Status to the Secretary within 60 days after the initial performance test in permit condition 8.5 is completed. The Notification of Compliance Status shall contain the following:

1. The methods used to determine compliance;
2. The quantity of particulate matter emitted during the performance test, in pounds per million Btus heat input;
3. The operating load during the performance test;
4. A description of the monitoring device that will be used to continuously measure the operating load and the data collection system;

5. A statement by the owner or operator as to whether the source has complied with the relevant standard or other requirements; and
6. A statement that the initial tune-up of the boiler was conducted in accordance with permit condition 8.7.

The Notice of Compliance Status shall be signed by the responsible official.

8.14 Annual compliance certification report

In accordance with 40 CFR § 63.11225(b), the owner or operator shall prepare an annual compliance certification report by March 1 of each year for the previous calendar year and submit it to the Secretary upon request. The report shall contain the following information:

1. Facility name and address;
2. Statement by a responsible official, with the official's name, title, phone number, e-mail address, and signature, certifying the truth, accuracy and completeness of the notification and a statement of whether the source has complied with all the relevant standards and other requirements of Chapter 8.0;
3. If the boiler experiences any deviations from the applicable requirements during the reporting period, include a description of deviations, the time periods during which the deviations occurred, and the corrective actions taken; and
4. The total fuel use by the boiler, for each calendar month within the reporting period, in gallons.

The owner or operator is required to submit the report by March 15 if the boiler experiences any deviations during the reporting period.

8.15 Boiler recordkeeping requirements

In accordance with 40 CFR § 63.11225(c), the owner or operator shall maintain the following records:

1. Identify the date of each boiler tune-up, the procedures followed for the tune-up, and the manufacturer's specifications to which the boiler was tuned;
2. Monthly records of fuel use by boiler(s), in gallons;
3. Occurrence and duration of each malfunction of the boiler or the device used to monitoring the operating load of the boiler;
4. Record of actions taken during periods of malfunctions to minimize emissions, including corrective actions to restore the boiler and or monitoring equipment to normal or usual operation; and
5. All records gathered in accordance with permit condition 8.9 and 8.10.

8.16 Reporting electronically to EPA

In accordance with 40 CFR § 63.11225(e), as of January 1, 2012, the owner or operator shall submit the results of each performance test electronically to EPA's Central Data Exchange by

using the Electronic Reporting Tool (e.g., <http://www.epa.gov/ttn/chief/ert/erttool.html/>) or other compatible electronic spreadsheet. Only data collected using test methods compatible with ERT are subject to this requirement. The owner or operator is required to submit the data electronically within 60 days after the date of completing each performance test.

8.17 Asserting an affirmative defense

In accordance with 40 CFR § 63.11226(a), the owner or operator may assert an affirmative defense to a claim of civil penalties for an exceedance of the emission limit in permit condition 8.1 that are caused by malfunction. Appropriate penalties may be assessed, however, if the owner or operator fails to meet the burden of proving all of the requirements in the affirmative defense. The affirmative defense shall not be available for claims of injunctive relief. To establish the affirmative defense in any action to enforce the emission limit in permit condition 8.1, the owner or operator must timely meet the notification requirement in permit condition 8.18 and prove by a preponderance of evidence that:

1. The excess emissions:
 - a. Were caused by a sudden, infrequent, and unavoidable failure of process equipment or a process to operate in a normal or usual manner;
 - b. Could not have been prevented through careful planning, proper design or better operation and maintenance practices;
 - c. Did not stem from any activity or event that could have been foreseen and avoided, or planned for; and
 - d. Were not part of a recurring pattern indicative of inadequate design, operation, or maintenance; and
2. Repairs were made as expeditiously as possible when the applicable emission limit in permit condition 8.1 was being exceeded. Off-shift and overtime labor were used, to the extent practicable to make these repairs;
3. The frequency, amount and duration of the excess emissions (including any bypass) were minimized to the maximum extent practicable during periods of such emissions;
4. If the excess emissions resulted from a bypass of a process, then the bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
5. All possible steps were taken to minimize the impact of the excess emissions on ambient air quality, the environment and human health;
6. All emissions monitoring systems were kept in operation if at all possible, consistent with safety and good air pollution control practices;
7. All of the actions in response to the excess emissions were documented by properly signed, contemporaneous operating logs;
8. At all times, the facility was operated in a manner consistent with good practices for minimizing emissions; and
9. A written root cause analysis has been prepared, the purpose of which is to determine, correct, and eliminate the primary causes of the malfunction and the excess emissions resulting from the malfunction event at issue. The analysis shall also specify, using best

monitoring methods and engineering judgment, the amount of excess emissions that were the result of the malfunction.

8.18 Notification of exceedance during a malfunction

In accordance with 40 CFR § 63.11226(b), the owner or operator shall notify the Secretary by telephone or facsimile (FAX) transmission if a boiler experiences an exceedance of the emission limit in permit condition 8.1 during a malfunction as soon as possible but no later than two business days after the initial occurrence of the malfunction, if the owner or operator wishes to avail itself of an affirmative defense to civil penalties for that malfunction. The owner or operator seeking to assert an affirmative defense shall also submit a written report to the Secretary within 45 days of the initial occurrence of the malfunction to demonstrate, with all necessary supporting documentation, that the owner or operator has met the requirements set forth in permit condition 8.17. The owner or operator may seek an extension of this deadline for up to 30 additional days by submitting a written request to the Secretary before the expiration of the 45 day period. Until a request for an extension has been approved by the Secretary, the owner or operator is subject to the requirement to submit such report within 45 days of the initial occurrence of the exceedance.

9.0 RECOMMENDATION

A review of this facility indicates it can operate in compliance with South Dakota's Air Pollution Control rules and the federal Clean Air Act. The Secretary, therefore, recommends that the Board of Minerals and Environment issue this construction permit with conditions to ensure compliance with SDCL 34A-1 and the federal Clean Air Act. Any questions pertaining to the Secretary's recommendation should be directed to Jim A. Anderson, Engineer II, at (605) 394-2229.